Precision Timing Based Electron Collision in a Superconductive Pathway for Routing of Fermions Within a Circuit

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Introduction

Optical-electronic hybrid systems can support faster switching speeds for processing and data storage/retrieval. As explained in several previous publications, information can be stored and retrieved using the emission of light, but problematically, the light emission mechanisms require electrons as a power source, creating a bottleneck on data storage/retrieval rates.

Abstract

Superconductive pathways such as those described in the 1 January 2024 mechanism (ibid.) may be used to transport electrons fermionically at least part-way through a circuit. The same materials, namely graphene, which act as conductors in one direction act as insulators in the other. However, as explained in that publication, the projection of Coulomb forces from six directions toward the centers of the hexagonal shapes transforms insulator to superconductor as these sheets can be layered upon one another and the apertures can, in the aggregate, form superconducting tubes.

These tubes, because they are composed of thin layers of graphene, can enable the sheets, themselves, to act both as junctions and as conductive pathways with each sheet leading to one of many possible destinations.

The behavior of electrons moving in opposing directions within one of these tubes can be leveraged, in combination with a precision clock, to allow for electrons to be routed through one, particular sheet. Rather than using logic to determine routing as in a traditional circuit, this system would rely upon precision timing.

If the distance to a particular junction (constituted by a sheet of graphene) is known, the travel time of fermionic electrons to that point within a superconducting pathway would be a known quantity.

If an electron were released at the proper timing from the opposing side of the tube, the interaction between the two electrons would cause both electrons to cease to superconduct at a specific, desired spatial point within the tube and would also cause them to change direction, necessarily making a 90-degree change in trajectory. This would cause each electron to enter a specific adjacent graphene sheet (one of millions from which an operator could select) and to be conducted conventionally, from there, through the desired layer of the material to a sub-junction. It would also have the benefit of allowing two impulses to be sent into each of two hemispheres of a processor or storage device. In fact, spin-control of the fermions would, in a planar system, allow for electrons to be directed in each of three potential combinations of directions (there are six atoms in each hexagonal form, two opposing points of

which would have to be used in a single impulse (left-to-right plus two diagonal options.) From there, timing-controlled Coulomb pulses could be used to further control the path of the electrons, resulting in their entering sub-junctions controllably, leading to light-emitters configured according to the 26 September 2025 design for optical switching of the spin orientation of trapped electrons aligned in an array.

Conclusion

This form of switching would be intrinsically faster both because the electrons would travel through the primary pathway at a greater velocity and because zero time would be required to change the configuration of the switch, unlike with a traditional semiconductor switch which takes some length of time to change voltage states. One million graphene layers and three possible electron divergence patterns for each would give us three million unique routing options for each superconducting corridor in the system, all of which would allow for electrons to be delivered fermionically for the majority of their journey through the circuit, thereby increasing overall efficiency of read/write operations as well as processing operations, as applicable.